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The June, 2008 issue of Ode Magazine (www.odemagazine.com) featured an article about one unusual way to impact global warming: eat a local grass-fed burger, specifically from carbon-farmed grass-fed beef cattle that had received no grain in the diet.

How can carbon farming, or the practice of taking carbon out of the air and putting CO₂ back into the soil, help fight global warming?

According to Ode, the idea is surprising on two counts. First, the cattle industry and meat production are targeted as leading sources of the emissions that cause global warming, right up there with autos, jet planes and coal-burning power plants. Second, until now, most efforts to stop global warming have focused on *reducing emissions*, not on taking existing carbon out of the atmosphere, a process known as carbon sequestration.

Progressive ranchers and farmers believe sequestration works, and the place to

As I See It

Eat a Grass-fed Burger—Fight Global Warming

Greg J. Harrison, DVM,
Dipl Emeritus ABVP-Avian, Dipl ECAMS (retired)

Eating grass-fed beef from sustainably managed herds will contribute in a small way to reversing global warming.

sequester the stuff is in the soil—hence the new field of “carbon farming.”

A new method of grazing called “holistic management” has become the basis of carbon farming. The central idea of carbon farming is to move the animals frequently, so grasses are not gnawed beyond the point of natural

recovery and plant cover remains to fertilize the land and sequester carbon.

In the sequestration process, the grass takes in carbon from the atmosphere; the animals trample the grass into the soil, where the carbon is absorbed; new grass sprouts; and the process is repeated, with the grass absorbing more carbon

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each time.

Eating grass-fed beef from sustainably managed herds will contribute in a small way to reversing global warming. But any large-hoofed animals—sheep, goats, bison, elk, antelope or horses—will have the same effect, and raising meat isn’t essential to the process.

The belief that meat-eating is a major cause of global warming due to the emissions from livestock operations

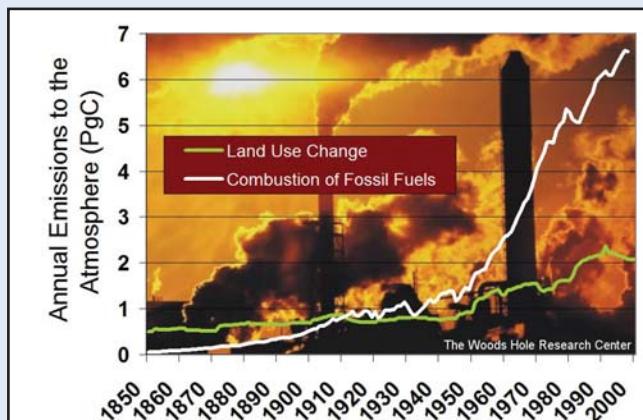
apparently applies to feedlots and not grass-fed livestock. Sustainably raised grass-fed beef is a natural system, and the methane and other greenhouse gases are mitigated by the carbon sequestration in the soil.

Grass-fed burger, anyone?



Online information about carbon farming:

- www.carbonfarmersofamerica.com
- [www.carboncoalition.com.au \(Carbon Coalition Against Global Warming - Australia\)](http://www.carboncoalition.com.au)
- www.managingwholes.com
- www.soilcarboncoalition.org
- www.amazingcarbon.com
- [www.whrc.org \(Woods Hole Research Center\)](http://www.whrc.org)



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A 25% of total CO₂ increase in the past 150 years came from agriculture. (PgC = Gigatonne or 1 billion tonnes Carbon)

Clinical NOTES

Organic Nutrition for Racing Pigeons*

Jan Hooimeijer, DVM
Clinic For Birds
Meppel, The Netherlands

Complete diets are still not commonly used for racing pigeons, despite the many advances in the aviculture of racing pigeons. Pelleted diets are available for poultry, waterfowl, pheasants, ostriches, parrots and other bird species; however, the demand for a complete balanced diet for racing pigeons has yet to emerge.

Champion racing pigeons are still becoming champions using grains and seeds as their "traditional" nutrition in combination with all kind of products containing vitamins, spore-elements and minerals for nutritional improvement. Fanciers use a variety of different foods according to their personal experiences. The hereditary quality of the pigeons to perform during the races dominates the

sport. Fanciers have yet to recognize that nutrition may be equally important. Over the years we see that fanciers are racing more with younger pigeons; rarely are pigeons older than 5-6 years of age used.

Malnutrition within the aviculture of racing pigeons is underestimated. According to a survey executed by the author, it is common that only 10 percent of the racing pigeons hatched in a certain year will survive more than three years. The majority of the young birds are culled within the first year. It is the author's experience that most serious signs of malnutrition in birds are only manifested after some years of chronicity. In older breeding pigeons we see the results of long-term malnutrition: molting disorders, diminished feather quality, egg quality problems and diminished development of their young. The life expectancy of even the best racing pigeons is less than 10 years of age. The life expectancy of racing pigeons on a complete balanced diet would be closer to 20-25 years.

Fanciers are starting to realize that proper and safe nutrition is the key for the future of their racing pigeons. A growing number of fanciers, clients of the Clinic for Birds, are finding that proper organic nutrition can make a difference during the breeding season, the racing season and the molting period. Within

the Clinic for Birds we are using different foods from Harrison's Bird Foods (HBF) for racing pigeons. The advantage of HBF is the guarantee that we are dealing with certified organic foods without agricultural pesticides, herbicides or anti-fungal products. Our advice is to invest in the best and most valuable racing pigeons to prevent problems and to get the best results. We recommend HBF during the time of breeding when the female is developing the eggs. During the period the youngsters are fed with crop milk, we advise the use of HBF Juvenile Formula and HBF High Potency Fine. We advise feeding HBF High Potency Fine or HBF Power Treats 3-4 days before racing and 1-2 days after returning home. We advise feeding HBF High Potency Fine during the molt. The most valuable racing pigeons are the older breeding pairs. We recommend supplying those pigeons with HBF High Potency Fine all year. The health and performance improvements will be greatest with a complete diet change; however, we see results with as little as 10 g Juvenile Formula per 10 pigeons, 10 g High Potency Fine per 10 pigeons, and 4 pellets Power Treats per pigeon. Fanciers do see the difference and are amazed that the general condition of the pigeons can improve within a few days.

*Adapted from the proceedings of Advances in Companion Bird Nutrition, held at the Bavarian State Institute for Health and Food Safety, Obersheißheim, Germany, March 6, 2004.

Prevalence of Gram-negatives in Healthy Psittacines is Not Normal

Andre Becker Saidenberg, DVM, MS

Ornithopathology Laboratory

University of São Paulo, Brazil

I just finished my Master's thesis on "Virulence Factors Found in *E. coli* in Asymptomatic and Symptomatic Captive and Free-living Psittacines in Brazil." My results indicate that there is actually a greater prevalence of *E. coli* in birds with presenting signs than in birds without clinical signs. But at the same time, some virulence factors characteristic of highly pathogenic *E. coli* are also found in apparently healthy individuals (enteropathogenic *E. coli* in captive birds with a

background of illegal trapping, and avian pathogenic *E. coli* in a small percentage of free-living birds). For example, all samples collected from hyacinth and Amazon nestlings had profuse gram-negative growth, although this is a qualitative and not a quantitative result (samples were incubated in enrichment broth).

Regarding an earlier study by Sigurdson Scott and Joyner¹ with a prevalence of Enterobacteriaceae and fungi isolated from the choana and cloaca of wild yellow-naped Amazon chicks (*Amazona auropalliata*),¹ my results are similar, considering that our psittacine nests are all located inside farms that are no longer a pristine environment, and contamination and stress could be related to these conditions.

My guess is that either the high gram-negative growth (including possible pathogenic strains) is due to habitat contamination and/or natural contamination inside the nest. Perhaps these bacteria were just transient in their GI tract and were eliminated as soon as they left the nest. This is possible, especially because nestlings have more daily contact with organic and fecal material, and the same nests have often been used previously by other avian species (e.g., owls, Muscovy ducks) and even mammals like lesser anteaters.

1. Sigurdson Scott C, Joyner KL: The microflora of wild yellow naped Amazon (*Amazona auropalliata*) chicks in Guatemala. Proc Assoc Avian Vet, 1995, p 123.



Spirulina and Other Antioxidant-rich Diets Reduce Brain Damage from Stroke

A study from the University of South Florida College of Medicine suggests antioxidant-rich fruits and vegetables may limit brain damage from stroke and other neurological disorders. The researchers studied four groups of rats, all fed equal amounts of food for 1 month. One group was fed rat chow supplemented with blueberries, a second group chow with spinach, and the third chow with spirulina. The control (untreated) group ate chow only.

After 4 weeks, an ischemic stroke with reperfusion was induced in the rats. An ischemic stroke occurs when a blood clot cuts off the oxygen supply to the brain like the kink in a hose cuts off water flow. Then, later, the clot is released and blood flow returns, which is known as reperfusion.



The size of the stroke in the rats fed blueberry or spinach supplements was half that seen in the brains of untreated rats. Rats fed spirulina-enriched diets had stroke lesions 75% smaller than their untreated counterparts. In addition, rats pretreated with the blueberry, spinach or spirulina diet showed greater increases in post-stroke movement than the control group. All the supplemented diets were rich in antioxidants and contained anti-inflammatory substances that may help reduce inflammation-induced injury following a stroke. Spirulina is an ingredient in most Harrison's formulas.

School Lab Mice "Freak Out" on GE Food

Schools in Wisconsin are showing kids the dangers of genetically engineered (GE) junk food with some unique science class experiments. Sister Luigi Frigo

repeats the experiment every year in her second grade class. Students feed one group of mice unprocessed whole foods. A second group of mice is given the same junk foods served at most schools. Within days, the second group of mice develops erratic sleeping schedules and become lazy, nervous and even violent. It takes the mice about 3 weeks on unprocessed foods to return to normal. According to Frigo, they tried to do the experiment again a few months later with the same mice, but the animals had learned their lesson and refused to eat the GE food.

From *Organic Bytes*, a publication of Organic Consumers Association
www.organicconsumers.org

Chemicals on Golf Courses

"Golf at a Crossroads" is a 32-page booklet describing the extensive list of chemical pesticides applied to golf courses and how to reduce your exposure to them. The booklet is available from Rachel Carson Council, Inc. (PO Box 10779, Silver Spring, MD 20914, 301-593-7507, RCCouncil@aol.com, <http://members.aol.com/rccouncil/ourpage>).



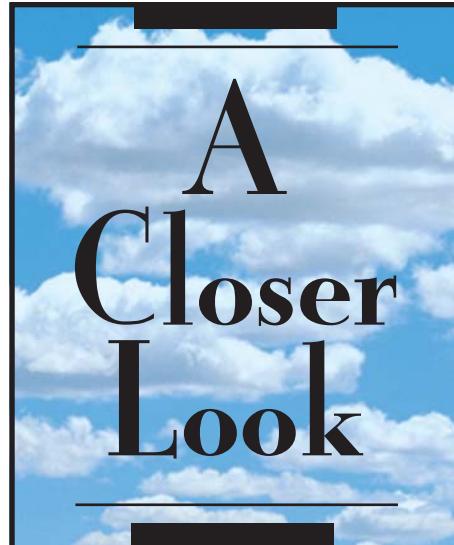
Montmorillonite Clay

Some people may be surprised to see that clay, specifically Montmorillonite clay, is listed as one of the ingredients in Harrison's Bird Foods. Most bird lovers, however, are familiar with photos of macaws, Amazons and other birds flocking to clay licks near the Tambopata Research Center in Peru. It has long been believed that the birds use this clay as a detoxifier in their diet in the wild. Most recently there is strong evidence that it is a natural antibiotic to pathogens.

Research indicates that Montmorillonite clay has the ability to bind mycotoxins in the digestive system of animals.

Montmorillonite is also known as "living clay" because of its reputed therapeutic effects. It has been used by over 200 separate cultures as well as Native American healers for centuries as an internal (stomach or intestinal distress) and external (open wounds) healing agent.

Montmorillonite clay was named after the town of Montmorillon, France, where it was first identified. It is the most common and most sought-after among the clays that can be ingested orally.



The primary mechanism of action is adsorption of toxins in the gastrointestinal tract. Montmorillonite clay is reported to effectively and safely provide internal cleansing of the body.

Current research indicates that Montmorillonite has the ability to bind myco-

It has been reported that Montmorillonite clay removes:

- Heavy metals, e.g., aluminum, mercury, lead, arsenic, copper, cadmium
- Formaldehyde
- Chemicals
- Pesticides, herbicides
- Aflatoxins
- Bacterial food poisoning

toxins in the digestive system of animals as well as several bacteria in vitro.

As a potent detoxifier, Montmorillonite clay is used extensively in humans in the treatment of pain, open wounds, colitis, diarrhea, hemorrhoids, stomach ulcers, intestinal problems, acne, anemia and a variety of other health issues. Clay not only cures minor problems through local application; it acts on all the whole organism, apparently improving the health of many people suffering from a wide range of illnesses. It also provides an assortment of minerals, including calcium, iron, magnesium, potassium, manganese, sodium and silica—all alkalizing to the blood and tissues and encouraging their absorption by the intestinal villi.

References

1. Pimpukdee K, Kubena LF, Bailey CA, et al: Aflatoxin-induced toxicity and depletion of hepatic vitamin A in young broiler chicks: Protection of chicks in the presence of low levels of NovaSil PLUS in the diet. *Poult Sci* 2004 May;83(5):737-44.
2. Phillips TD, Lemke SL, Grant PG: Characterization of clay-based enterosorbents for the prevention of aflatoxicosis. *Adv Exp Med Biol* 2002;504:157-71.





New Flavors for Harrison's Bird Bread Mix

Harrison's Bird Bread Mix, a special certified organic mix for home preparation of bird food, is now available in 3 flavors: Original, Hot Pepper and Millet & Flax. Because Bird Bread Mix contains no preservatives, some care is recommended for storage. If the bag is opened, the top can be zipped closed or rolled down and closed with a chip clip for 4 to 6 weeks. After baking, Bird Bread can be stored for 1 week in the refrigerator or up to 1 year in the freezer. Baked Bird Bread can be divided into portions, wrapped in plastic wrap and placed back in the original Harrison's Bird Foods bag for storage in the freezer. Bird Bread should not be reheated in a plastic container.

HBD NEWS



Tanya Harrison Coffinberry



An evening meal in an organic restaurant in Marquette, Nebraska gathered together some key people who provide ongoing support for the production of Harrison's Bird Foods (from left): Don Vetter, retired organic farmer and father of David; David Vetter, owner and manager of Grain Place Foods in Marquette; Jean Vetter, manager of the quality control laboratory and wife of David; Dr. Kirk Klasing from the University of California, Davis, HBD's nutritional consultant; Dr. Greg Harrison of South Palm Beach, Florida, founder of the company; Fayne Petersen, owner of Creative Cuisine Organic Catering; and Linda Harrison, HBD publications director.



"Tips to Reduce Feather Picking" Brochures

Feather picking is one of the most complex and frustrating problems faced by a private practitioner who sees birds as patients, primarily because the causes can be hard to determine. Zoological Education Network has developed a new brochure, "Tips to Reduce Feather Picking," to support the clinician in exploring possible reasons why pet birds pick their own feathers and to offer some promising solutions for relieving the clinical signs. The brochures are available free upon request with an order: 800-346-0269.

HBD to Co-sponsor Irene Pepperberg Program

Irene Pepperberg, best known as the companion of Alex, the apparent Einstein of African grey parrots, is joined by neuroscientist Richard Restak on December 10, 2008 in a special program co-sponsored by HBD International (Harrison's Bird Foods) and The Smithsonian Associates to look at the cognitive and communicative abilities of grey parrots.

The Smithsonian Associates is the educational arm of the Smithsonian Institution, presenting about 1200 local programs each year consisting of lectures, seminars, multi-week courses, and family programs. The Smithsonian Associates is a self-sustaining membership organization that receives no federal or outside funds. For further information on the program visit www.ResidentAssociates.org or contact 202-633-3030.



What's Unique About Harrison's Bird Foods?

There are so many reasons why Harrison's Bird Foods (HBF) are unique and produce the remarkable results seen in pet birds (aside, of course, from the use of certified organic ingredients and extrusion processing):

- **Third party certified organic.** An audit trail must be established for all ingredients; thus, independent third party confirmation is essential to verify the organic source for each component of HBF formulations.
- **Premium natural ingredients.** Harrison's is the only company that uses premium natural ingredients, such as kelp, sea salt, Montmorillonite clay, whole ground grains, toasted oats, peanuts, sunflower, lentils, green peas, rice and sun-dried alfalfa as well as distinctive elements like sesame, chia, anise, gray millet and buckwheat.



- **Spirulina,** well known for its antioxidant properties, is an important part of all HBD formulations (see page 3) (with the exception of Neonate and Recovery).
- **No wheat.** None of Harrison's Bird Foods formulas contains wheat. The Adult Lifetime Mash (ALM) has particular anti-allergen properties because it does not contain any sunflower, peanuts or corn, all of which have been linked to potential allergic signs in birds.
- **Monitoring at all steps during the process.** The

HBF manufacturer provides careful monitoring during all preparation and produc-

tion stages (e.g., during the "rolling" process, oats are checked to prevent high temperatures that will increase oxidation; prior to use, each batch of corn is tested for the presence of aflatoxins, and small grains are tested for the presence of genotoxins).

- **Birds (and other animals) like it!**
- **And, the best reason of all: it works!**



Bruno Burro gets a treat from Italian veterinarian, Linda Tomassi in this "Before" photo. Stay tuned for "After" photos.



Q. Do you have any suggestions for mental stress (such as losing a mate) for birds?

Christine Barber, DVM
Appleton, Wisconsin

A. As far as I know that has not been addressed properly by anyone. Some things to try are:

- Keep the bird in the dark for a longer period for a few days—even dim light for a few hours.
- Provide sounds of compassion, such as praying, soft words of loving concern or soft singing.
- Offer a stuffed toy or other item the bird could cuddle up to.



- Place a mirror near the perch.

Greg J. Harrison, DVM,
Dipl Emeritus, ABVP-Avian,
Dipl ECAMS (retired)

A. A good antidote to stress is arranging the environment to increase an animal's control over its own outcomes. Choice is very empowering and healthful. A sound first step, in my opinion, is to describe the behavior you are seeing that indicates stress and the conditions under which they occur and don't occur.

Susan G. Friedman, PhD
Department of Psychology
Utah State University



WE GET MAIL



Sample Started It All

Almost 2 years ago you sent me a sample of your food. My 2 blue and gold macaws and 2 African greys have been thriving on it ever since. I would like to thank you for that original sample.

Eddie Quinn
(www.fateddie.com)

Cockatiel Looking Better

I adopted a lutino cockatiel from the Humane Society and kept it on the Harrison's food they had started feeding it. My other cockatiel (15 years old) had died, and my parakeet was lonely. They both were on a seed diet and were very picky—eating only the millet seeds. The parakeet's cere was pretty deformed, and even this new bird looked ratty to begin with. After feeding Harrison's for approximately 2 months, the parakeet's cere is returning to normal and is blue! So she is a *he*! The cockatiel is now very lively and sings a lot. Plus its feathers are growing in nicely. I can't believe what a miracle your food is.

Laura D'Amico

Red Palm Fruit a Natural Food for Free-ranging Greys in Africa

When I first started raising an African grey parrot back in 2000, I had a very wise avian veterinarian who started Rebecca on Harrison's. Now both she and my other bird, Kiki, adore Harrison's. Their feathers are absolutely beautiful. They seldom require any

trips for veterinary care other than their annual check-up. They also enjoy red palm oil on their food. This reduces the powder and makes molting much more comfortable. When I was in Africa, I was able to study African greys in the wild. They eat a steady diet of dura palm fruit. I thought you might be interested in that handy little fact.

Paula Callo, Midland, Texas



An African grey enjoys Harrison's Bird Bread at Dr. Sergio Sarmiento Valiente's veterinary clinic in Spain.

Budgie Conversion Made Easy with Harrison's Bird Bread Mix

A very stubborn pair of budgies (Waylon and Willie), who were on a strict diet of grocery store spray millet, were brought to us for a conversion trial.

We spent week 1 observing eating habits and then introduced AVIx Bird Builder to their water. The pair was ravenous for spray millet and turned up their beaks to anything else offered.

At that point we baked up a batch of Harrison's Bird Bread in small muffin shapes with spray millet mixed into

the bread. The bread was broken up into pieces and placed on top of a clean paper towel at the bottom of the cage.

As expected, for the first few days the pair sorted through the muffins for the millet. On day 3 though, we observed that they were also now eating bits of the Harrison's Bird Bread. The amount of millet mixed into the bread was reduced and eventually replaced with High Potency Fine (HPF). After a few more days, the millet was



completely removed and HPF was scattered among the pieces of Harrison's Bird Bread on top of the white paper towel.

Within a few days not only

were they off spray millet completely, they were now eating only Harrison's Bird Bread and HPF.

Tanya and Jean Coffinberry
Brentwood, Tennessee

The FDA allows more than 300 synthetic food additives in conventional foods. None of these are allowed in foods that are USDA certified organic.



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The Results Speak for Themselves



Avifood (Germany) has provided Harrison's Bird Foods for a special breeding project in Norway for more than 8 years. Even though the facility is in a relatively cold climate, the breeding results are extraordinary and the chicks are first-class quality.

One of the main sources of pesticide exposure for US children are the foods they eat according to the Centers for Disease Control and Prevention.



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